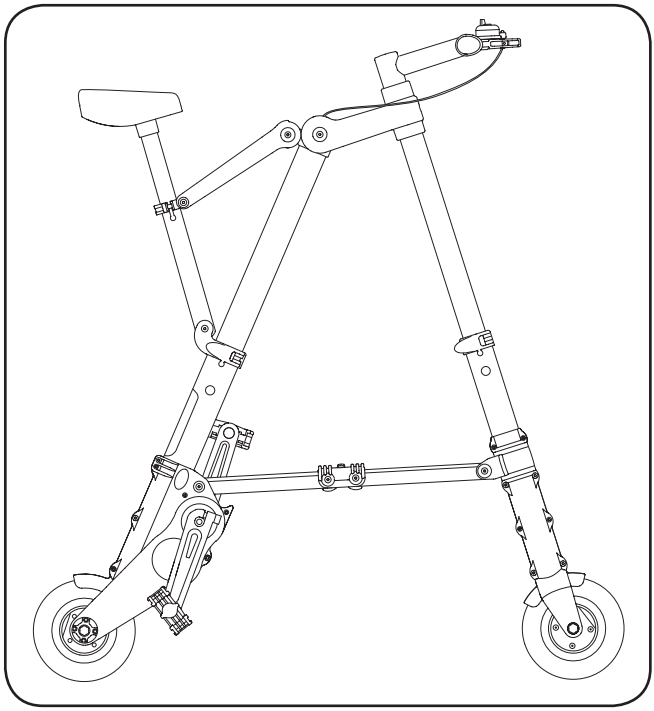
A-bike® plus



USER MANUAL

PLEASE READ BEFORE ATTEMPTING TO OPEN THE BIKE

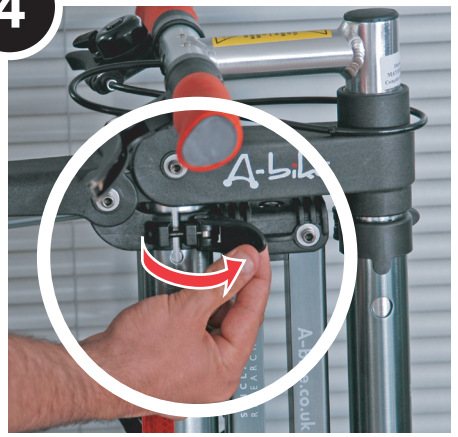
Design registered and patented

1

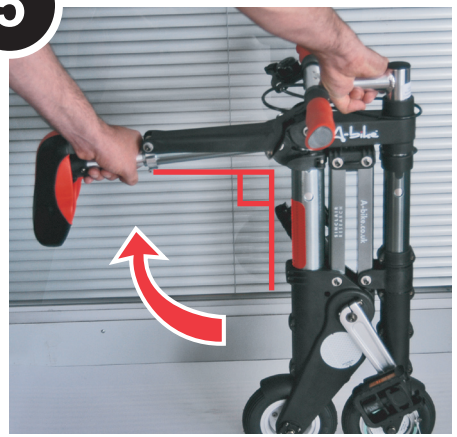
2

3

4

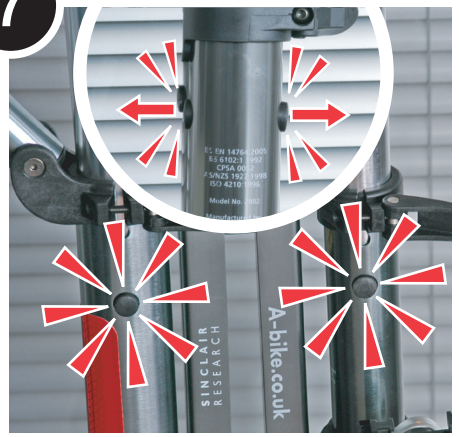


5

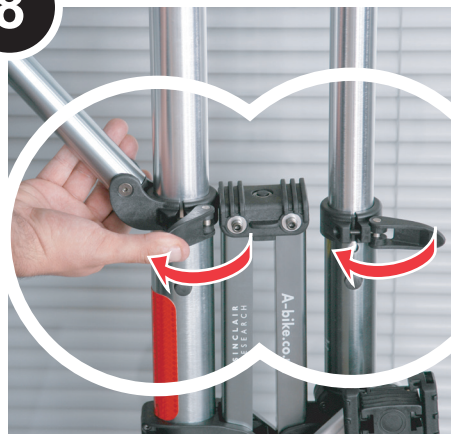


6

7



8

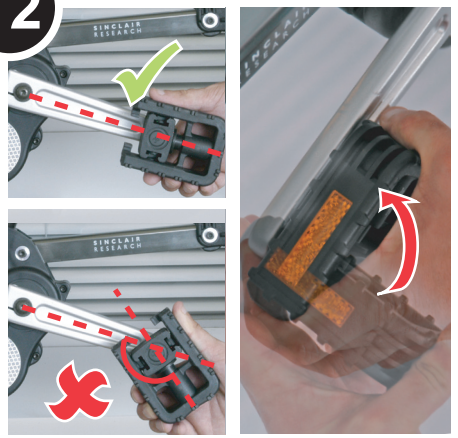


9

10

11

12



CONTENTS

Unfolding the bike (photo guide)	(inside cover)
Introduction	1
Your A-bike Plus	2
Setting Up	7
Maintenance	19
Repairs	21
Warranty	32

SINCLAIR
RESEARCH

The A-bike was designed by
Sinclair Research in London

Sinclair Research is a registered trademark.

Introduction

Congratulations and welcome to the A-bike Plus, the world's lightest and smallest folding bicycle. Before using the bike you must read these instructions.

Designed for short trips and mixed mode transport the A-bike Plus is unique in concept and design. This booklet will introduce you to, show you how to use, take care of and to make repairs to your A-bike Plus. It is vital that you use and maintain the bike correctly to avoid damaging the product and harming yourself.

Please pay particular attention to notes highlighted in a box as these are especially important and must be remembered at all times.

The geometry of the A-bike Plus is quite different from any other bike and hence may feel a little strange at first, after a bit of practice we are sure you will find the bike easy and comfortable to ride. Getting to know your A-bike Plus will enable you to get the most out of it and know the limits, enabling your to use it safely.

INTRODUCTION

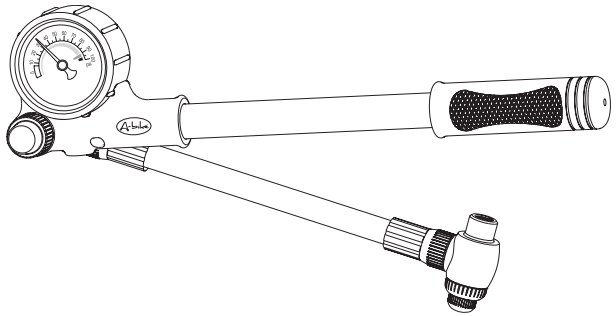
Box contents

- A-bike Plus folding bicycle
- A-bike Plus air cushion saddle cover
- A-bike Plus toolkit
- A-bike Plus user manual

- A-bike Plus pump (optional)
- A-bike Plus Bag (optional)

The inclusion of the A-bike Plus Bag and A-bike Plus Pump may vary in different countries.

Please note that riding the bike with under inflated tyres will damage the bike and therefore it is highly recommended that users use a Schrader pump with a pressure gauge. Also due to the high pressure and low volume of air it is advised to use the A-bike shock pump which minimises air loss when dis-attaching the pump.



Warnings ⚠

Rider weight limit
The bike has a maximum weight limit of 85 kg (187 lbs), this includes the rider and anything the rider is carrying, for example a back pack.

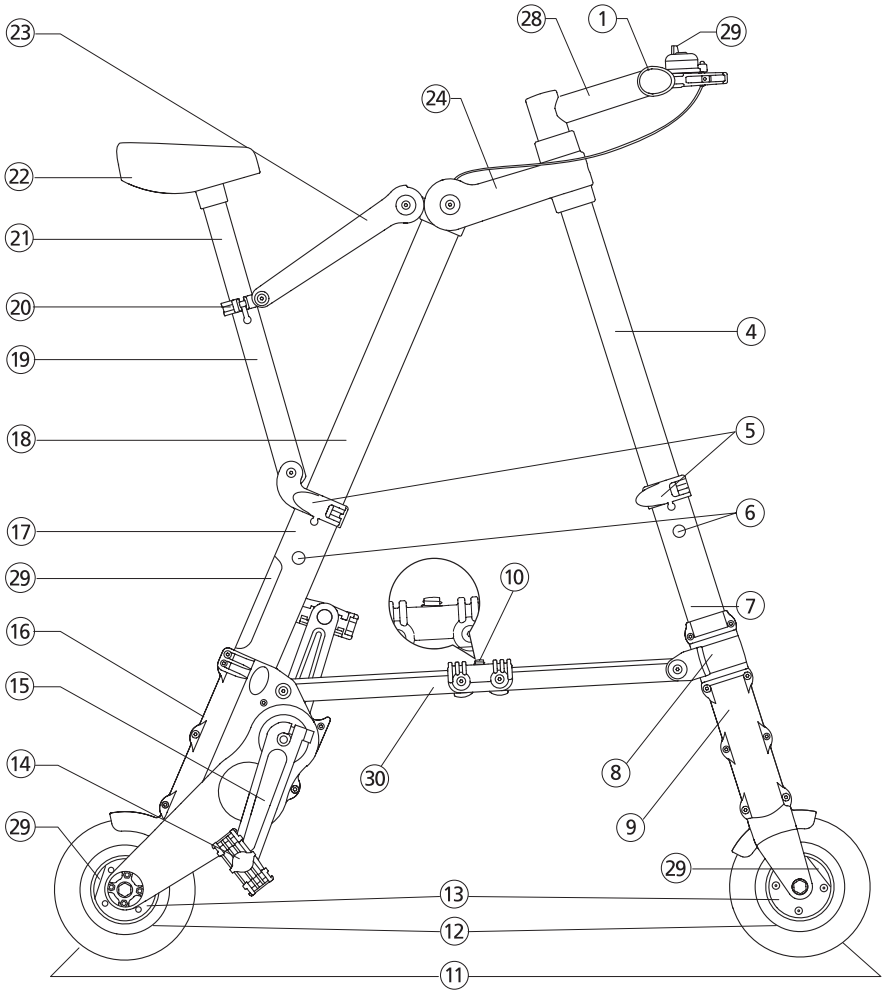
Not a mountain bike
The A-bike Plus is designed for smooth roads and it's lightweight construction means it's not suitable for rough surfaces, off-road riding. Do not attempt stunts on the bike.

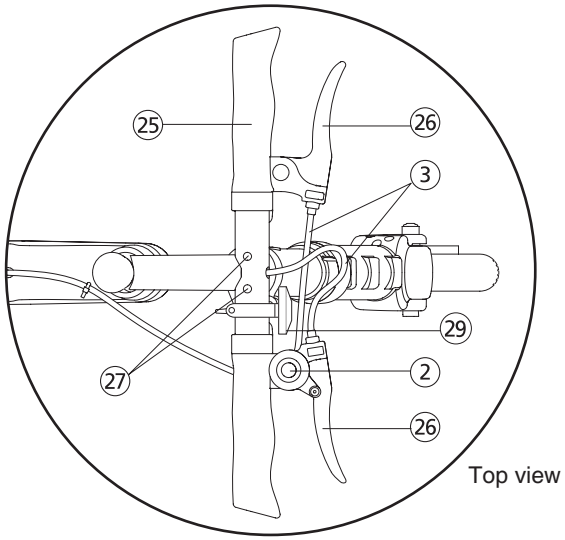
Under inflated tyres
Riding the bike with under inflated tyres will damage the bike, please ensure the tyres are inflated to 90 psi (6.2 bar).

Quick release levers and locking buttons
When opening the bike ensure that the locking buttons pop out. The two quick release levers here should be hand tight and firmly secured.

Don't step on the crosspiece
The crosspiece is not designed to bear any load. Do not stand on or attach anything to this beam.

Labelled diagram





Top view

1. Handle Bar
2. Bell
3. Brake Cable
4. Front Upper Tube
5. Quick Release Clamp
6. Main Locking Buttons (on both side)
7. Front Lower Tube
8. Lower Steering Joint
9. Front Fork
10. Crosspiece Button
11. Tyre
12. Brake Band
13. Wheel Hub
14. Pedal (on both sides)
15. Crank (on both sides)
16. Crank Case
17. Rear Lower Tube
18. Rear Upper Tube
19. Outer Seat Tube
20. Seat Clamp
21. Seat Post
22. Saddle
23. Seat Stay
24. Upper Steering Joint
25. Handlebar Grip
26. Brake Lever
27. Handlebar Locking Buttons
28. Handlebar stem
29. Reflectors
30. Crosspiece

Riding Safely

When riding the A-bike Plus it is important to remember to abide by local bicycle riding laws.

Ride defensively and be vigilant of other road users. Always leave a large enough gap between you and obstacles, slow down and stop if necessary.

Watch out for uneven surfaces and pot holes.

When riding in the dark you should wear high visibility clothing and use lights when appropriate.

Wet weather will reduce grip and increase stopping distances; ride slower if necessary. Icy conditions should be avoided entirely. Windy conditions can severely effect riding stability.

Always wear a helmet when riding.

Always wear suitable shoes, sandals are not appropriate.

Avoid loose clothing and anything that may get caught in the mechanisms of the bike.

Become familiar with riding your bike slowly and in a safe environment before heading into areas with other traffic.

Store you bike securely and safely in a clean and dry area to avoid damaging the bike.

If there are any broken parts, they must be replaced before riding.

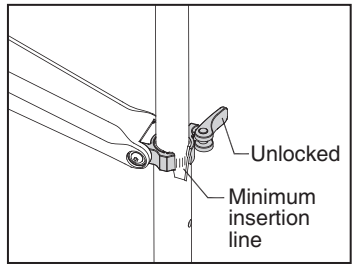
Adjusting saddle height

Before riding the bike check the seat height is adjusted, the tyres are inflated and the brakes work.

Choosing the Correct Saddle Height
With both feet flat on the ground adjust the saddle height so that you can comfortably sit on the saddle.

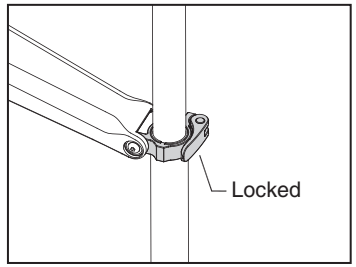
1. Unlock the Seat Post quick release clamp.

2. Slide the Seat Post vertically to adjust the Saddle position as required.



The minimum insertion line should NOT be visible, it should be inside the outer tube.

3. Once the desired Saddle position has been selected, make sure the saddle is positioned forward and then lock the Seat Post quick release clamp so that you cannot twist the saddle out of alignment.



If the saddle can twist then unlock the quick release lever and tighten with an allen key before locking the quick release again and re-testing.

Checking the tyres

Under inflated tyres make the ride less comfortable and less efficient, turning and pedalling become difficult. It will also damage the bike and could invalidate your warranty.

Riding the bike with under inflated tyres will damage the bike, please ensure the tyres are inflated to 90 psi (6.2 bar).

To check the pressure it is possible to visually inspect the tyres by pushing on the outside of the tyre, they should be very firm. However for an accurate reading a pressure gauge is required.

Take care when accessing the valve and avoid pulling on it or using excessive force, as this can cause the valve to tear away from the innertube.

You should also take this opportunity to check the tyre's tread, to check for damage to the tyre and for debris in the tyre. Spotting a piece of glass and removing it now could prevent a puncture later. Tyres should be replaced when they become worn.

The tyres of the A-bike Plus contain a special gel that automatically seals any small holes so hopefully punctures will be minimal.

Adjusting the brakes

If the brake band is knocked it is possible for it to become misaligned with the braking hub and wheel. If this happens it may be necessary to gently bend the band back into shape. Care must be taken not to cause strain around the brake band mounts. If the brake band rubs against the wheel it can be gently bent away.

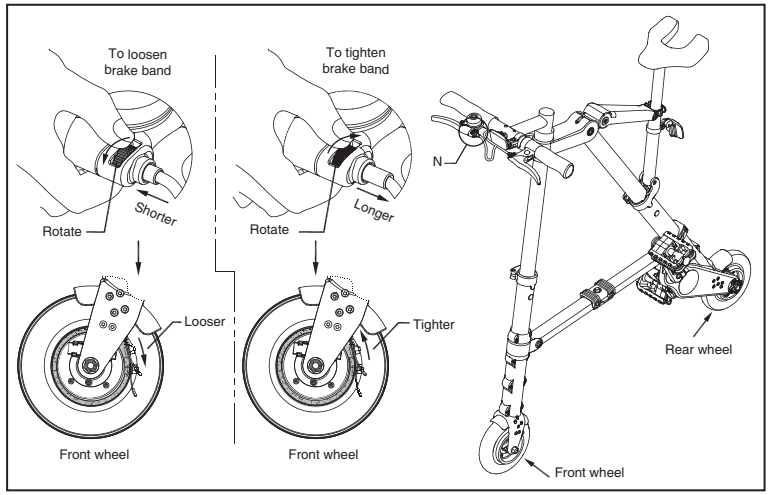
Hot brake bands and brake fade
The band brakes will become hot when used, be aware of this when storing and handling the bike, allow the brakes to cool.
Brake fade may occur when used for long periods of time.

Adjusting brake bands

Only adjust the brakes when the bike is fully unfolded and extended as this effect the brake cables.

Fine brake cable adjustment

To adjust the Right Hand brake (Front wheel):



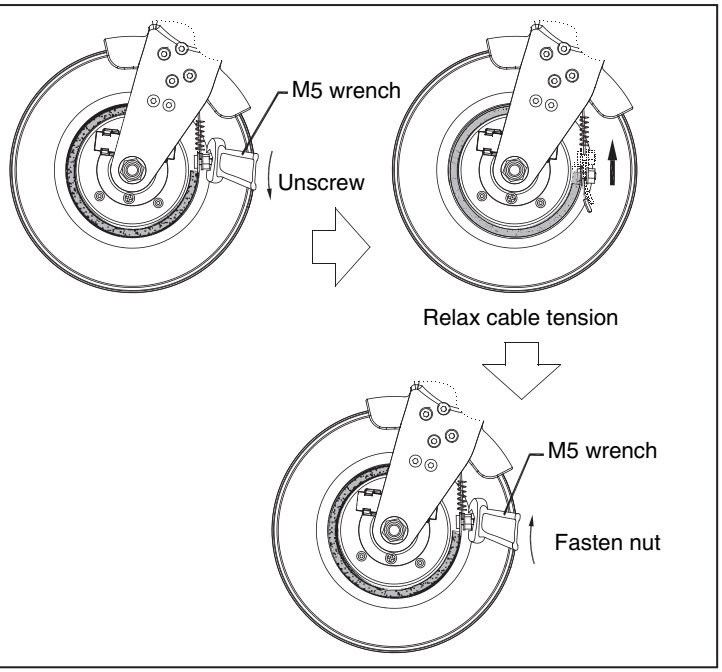
The fine adjustment wheel can be found on the brake handles. Turn it to change length of the cable accordingly as shown in the diagrams. You may need to hold the cable still to prevent in rotating.
To adjust the rear wheel, do the same as above but on the left hand brake lever.

Adjusting the brakes (2)

Major brake cable adjustment

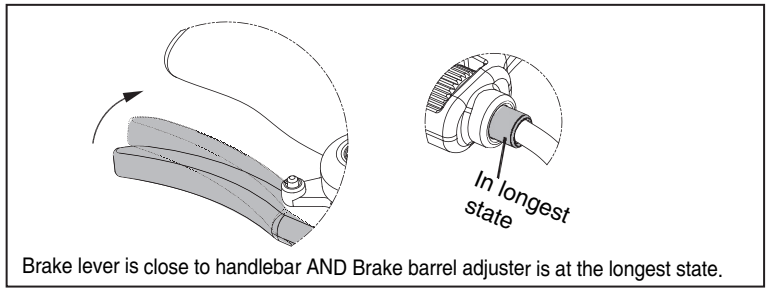
To loosen a tight brake

Relax brake band to reduce braking force.

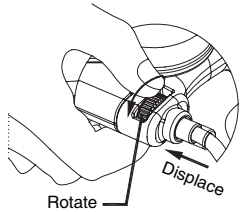


To tighten loose brake

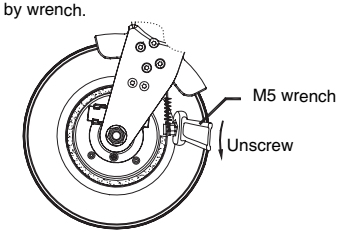
When the brake is too loose.



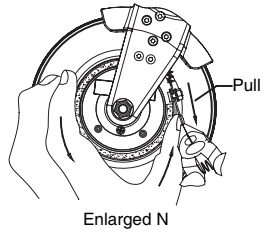
Rotate brake barrel adjuster to move the brake barrel fully in.



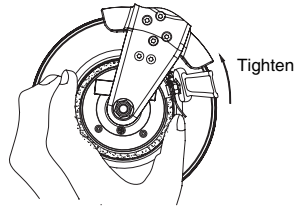
Unscrew M5 nut by wrench.



Wrap the brake band closely around the brake barrel, using pliers to pull the cable end out.



Tighten the nut



SETTING UP

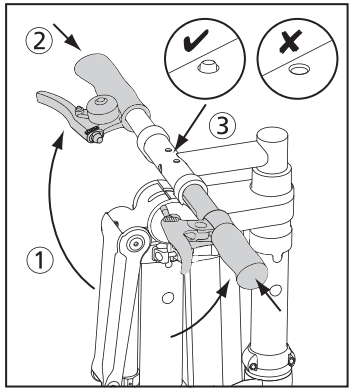
Unfolding the bike

Please also refer to the illustrated photo guide which can be found inside the front cover of this user manual.

Trapped fingers
Fold and unfold the bike slowly and take care to avoid trapping fingers, especially when dealing with the pedals.

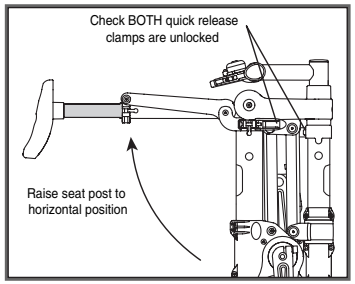
It is important to follow each step in the correct order, the bike does not need a lot of force to be unfolded and can be done in as little as 10 seconds.

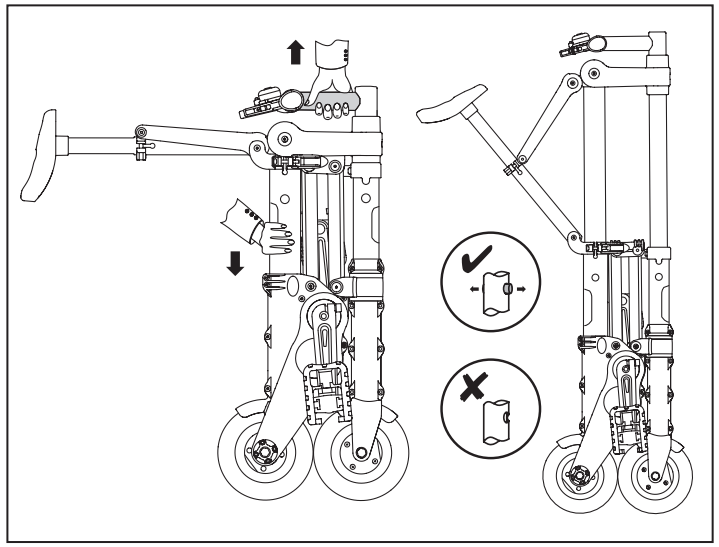
1. Lift the Left and Right Handle Bar ends up to the horizontal position and slide them into the centre portion. Check that both locking buttons are fully engaged.



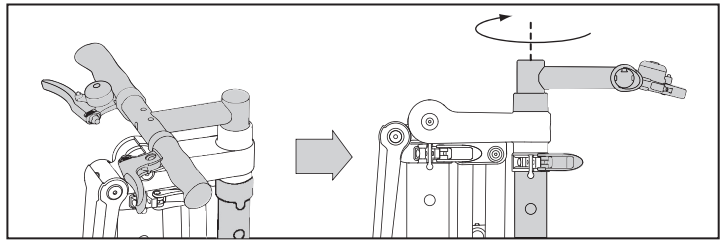
2a. Check BOTH quick release clamps are unlocked.

2b. Raise seat post to horizontal position.

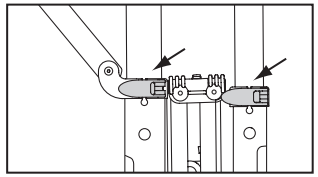




3. Grasp handlebar stem and rear leg as shown and extend legs until all FOUR quick release buttons are locked.



4. Rotate the Handle Bars 180° <u>clockwise</u> (looking from the top). DO not force it in the wrong direction as this will wrap the brake cable around the stem of the hadelbars and damage the bike.

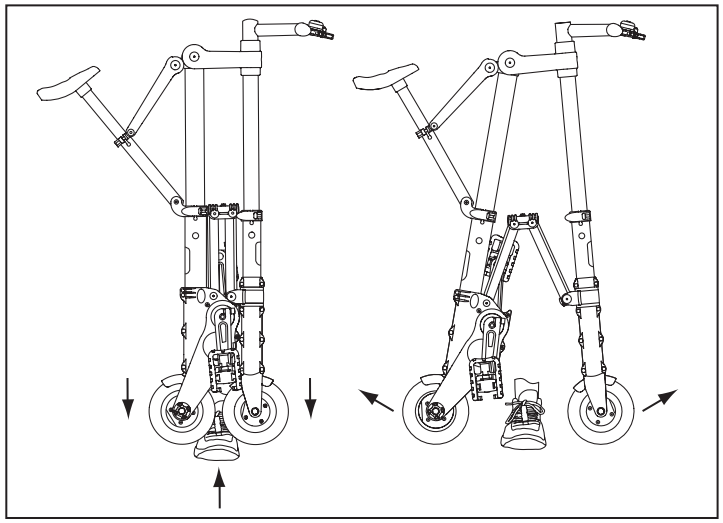


5. Lock both quick release clamps.

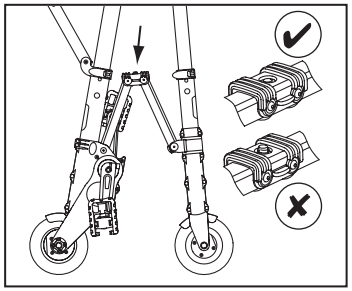
Quick release levers and locking buttons
When opening the bike ensure that the locking buttons pop out. The two quick release levers here should be hand tight and firm.

SETTING UP

Unfolding the bike (2)

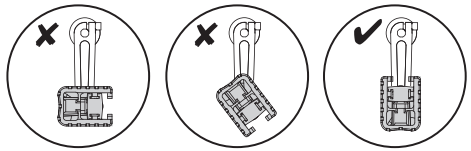


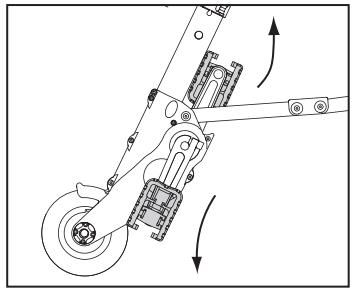
6. To open out the legs, lower the bicycle down gently onto the top of your foot with a tyre either side of the foot. As the legs part, simply push down to fully open out.



7. Press the crosspiece centre down until the quick release button pops up and locks.

Crosspiece locking button
The locking button the crosspiece must pop out when the bar is fully unfolded.





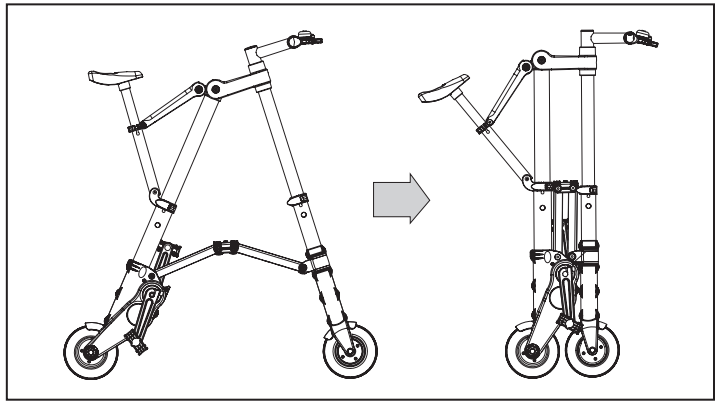
8. Align the Pedal parallel to the Crank, and fold it outward. Be careful not to pinch your fingers.

9. Now that the A-bike Plus is fully unfolded, check to make sure that both Handle Locking Buttons, four Main Locking Buttons and the Crosspiece Button are fully engaged, the Front and Rear Clamps are locked and the Crosspiece is straight and locked before riding.

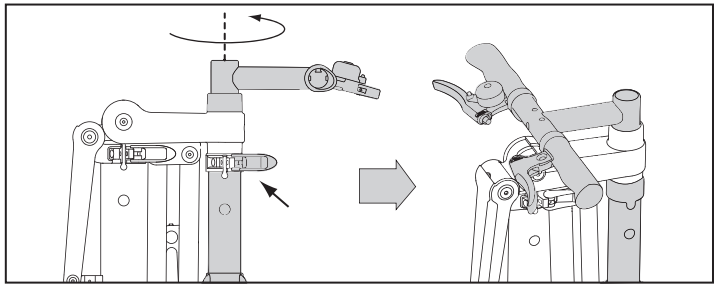
SETTING UP

Folding the bike

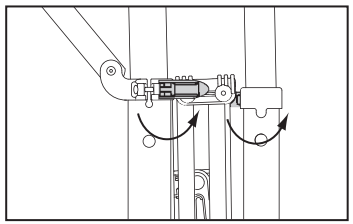
To fold the bike



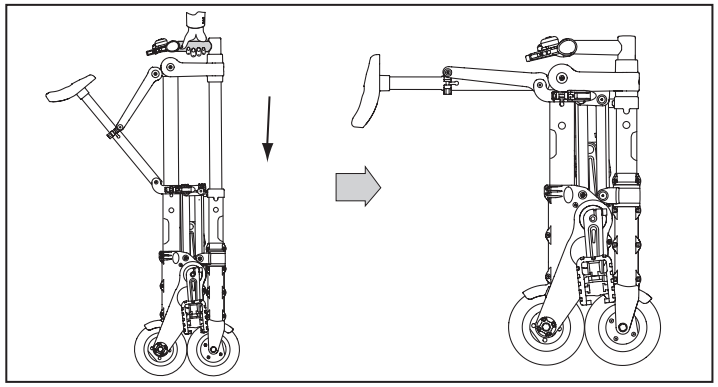
1. Press down the locking button on the Crosspiece and lift it up into the folding position. Push both sides of the bike firmly together, you should hear a click as the two sides clip together, this is important for the next step to work.



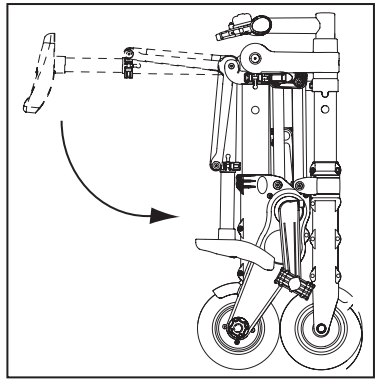
2. Rotate the handlebars 180 degrees counter clockwise viewed from above.



3. Ensure both clamp levers are unlocked

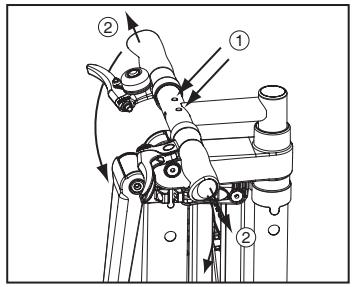


4. Press and hold all FOUR buttons and simultaneously push down on top of the bike.

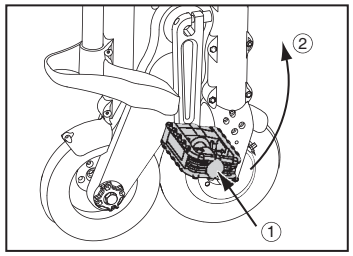


5. Saddle will drop under its own weight when legs are fully telescoped down.

6. Press and hold the two Locking Buttons on the handle, pull the Left and Right Handle Bars out and flip them down until both are in vertical position.

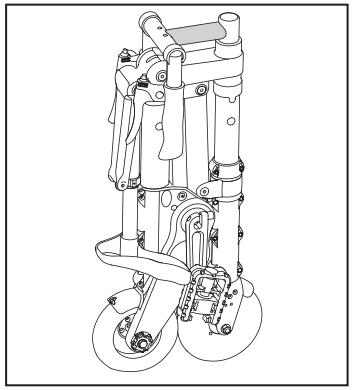


Folding the bike (2)



7. Press inwards to flip both Pedals up into vertical position. Be careful not to pinch your fingers.
Please ensure the pedals are aligned perpindicular to the crank as per unfolding insturctions.

8. Now that the A-bike Plus is successfully folded, you are now ready to carry your portable A-bike to your next destination.



Maintaining your bike

Like all bikes the A-bike Plus requires some simple maintenance to run at it's optimum and prevent parts from becoming damaged.

It is vital that you maintain your A-bike Plus!

If you notice in a small change in performance of the bike we recommend you check the bike as this is often a sign of the beginning of a potentially serious problem.

Weekly checks

• Check your A-bike Plus before every ride. Special attention should be given to brakes, wheels, tyres and all quick release clamps and locking buttons.
• Check wheels are securely attached to the frame and forks.
• Check tyres are inflated to 90 psi (6.2 bar) (do not use commercial air lines) and tread is in good condition.
• Check brakes work effectively and the bands are aligned with the rim.
• Check pedal cranks and pedals are securely attached.
• Check all four main lock buttons are fully locked.
• Check the Crosspiece button is locked.
• Check both quick release clamps are locked.
• Check both handle bars locking buttons are fully engaged and locked.
• Check Pedals are unfolded and locked.
• Check Saddle and seat post are secure and adjusted to the correct height.
• "Listening-check". Spin both wheels and listen for any rubbing sounds. Investigate and adjust if brakes are rubbing.
• "Snag-check". Check for frayed cables that may snag clothes when riding. Replace worn or damaged cables where necessary.
• Check for any deformed or cracked components which must be changed before use.

Maintenance

Clean the bike - dirt is the enemy of a smooth running bike and can eventually cause parts to seize in addition to causing corrosion. Carry out regular cleaning and corrosion protection of all parts of your A-bike Plus.

We recommend washing the A-bike Plus with a gentle flow of water, or from a bucket, using a damp cloth. This is also a great opportunity to visually inspect your bike.

Inspect the bike for damage
Damage to parts can result in sudden failure of that part. The bike should be regularly inspected, looking for cracks, discolouration of material, scratches and loose fastenings. If damage is found you should contact the vendor and seek advice before attempting to ride the bike.

Check your brakes - you should be able to stop the wheel from turning without the brake lever touching the handle grip. Test this when stood by the bike, NOT while riding it! If you need to adjust it look at the Repairs section of this user guide.

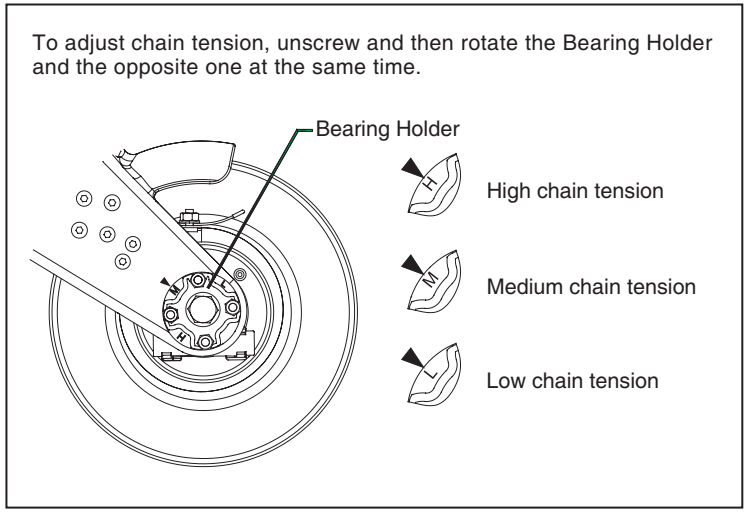
Clean the chain and lubricate regularly, this is vital to reducing wear to the bike and efficiency.

Adjusting chain tension

The A-bike Plus chain tension is preset in the manufacturing process. If the chain needs to be replaced it should be referred to a bicycle mechanic or an A-bike Plus dealer.

If the chain is too slack it may be noisy and if too tight it may make it difficult to turn the wheel. When viewed the chain should have some slack.

The


To adjust chain tension, unscrew and then rotate the Bearing Holder and the opposite one at the same time.
Bearing Holder
High chain tension
Medium chain tension
Low chain tension

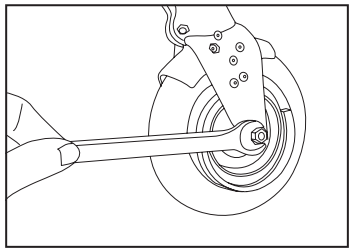
A-bike Plus has a two-chain drive system. Put the unfolded bike upside down on a clean surface. One chain can be obviously viewed, cleaned and lubricated through the gap in the crank casing where the wheel is. The other chain can be lubricated through a small inspection hole in the centre of the crank casing.

Fixing a puncture

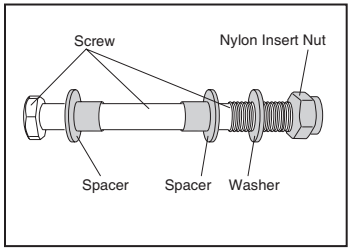
If you get a puncture you can repair this using a puncture repair kit suitable for high pressure applications.

Removing the front wheel from your A-bike Plus.

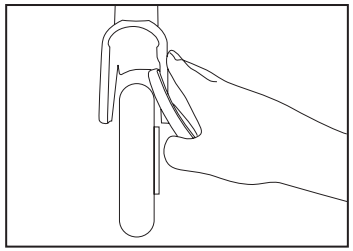
1. Remove the nut on the front wheel.



2. Pull the bolt out remembering the order of the spaces and washers for re assembly.



3. Hold the brake band out of the way to drop the wheel out. Take care not to stress the brake band mounting bolts.

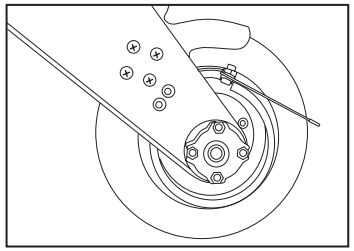


4. Refitting is the reverse of removal. Check that the brake band is correctly aligned on the wheel and that the fasteners are tightened.

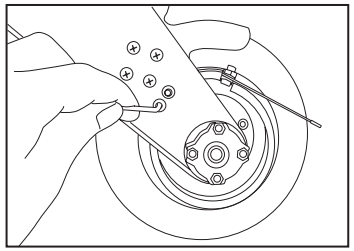
Fixing a puncture (2)

Removing the rear wheel from your A-bike Plus.
This is a two stage operation. First the brake band is moved out of the way. Then the wheel is removed.

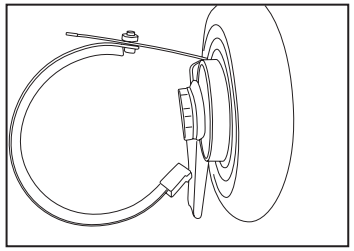
1. Place bike in folded position. (this slackens the brake cable)



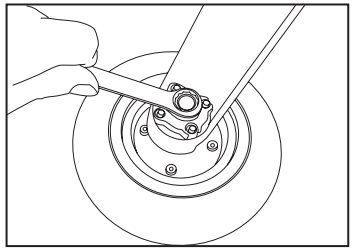
2. Remove two Brake Assembly bolts.



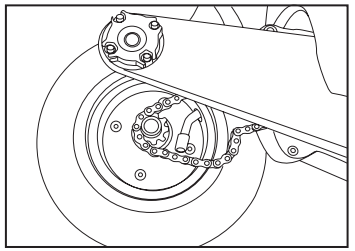
3. With the bike folded, use the slack in the brake cable and withdraw the Brake Assembly out of the crank casing. Do not remove cable from Brake band.



4. Remove rear axle bolts. Please note that the bolt on the right hand side of the bike (also highlighted by a red mark) is Left-hand threaded and therefore can be undone by turning clockwise, standard bolts are undone by turning them counter-clockwise.
To undo both bolts you must firmly hold the wheel still while turning each bolt.



5. Slightly spread open crank casing to allow the Drive Axle to drop out, take the chain off the sprocket and drop the wheel out.

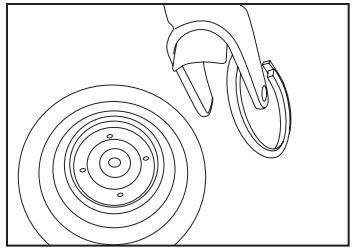


6. Refitting is the reverse of removal. Check that the brake band is correctly aligned on the wheel and that the fasteners are securely tightened. When refitting Brake Assembly fasteners make sure that the anti-vibration washers are refitted too.

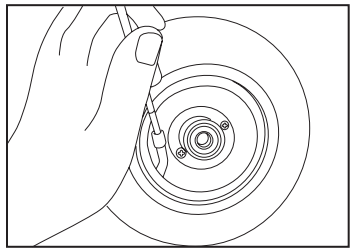
Fixing a puncture (3)

Replacing a tyre or puncture repair

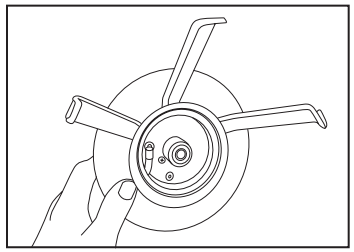
1. Remove the wheel as shown in the previous pages.



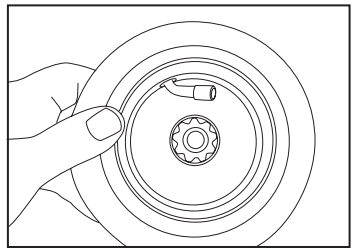
2. Remove the dust cap from the valve and release the remaining air from it by pushing the centre pin in.



3. Use PLASTIC tyre levers to remove the tyre.
Take the tube out of the tyre and repair the puncture with a puncture repair kit or simply replace inner tube/tyre. When repairing a puncture, follow the puncture repair kit's manufacturer's instructions. Only use tubes and tyres sourced from your A-bike Plus supplier.



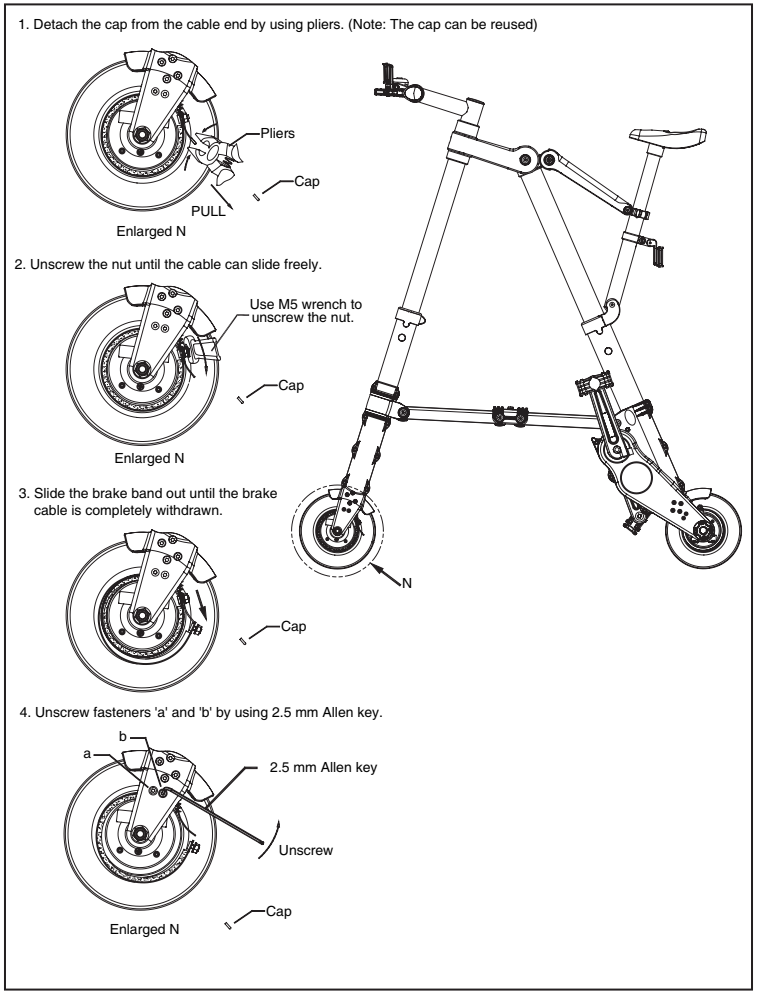
VERY IMPORTANT: When reassembling always make sure the valve on the tube faces clockwise, and tyre tread faces the correct direction. Inflate tyre to 90 psi (6.2 bar).

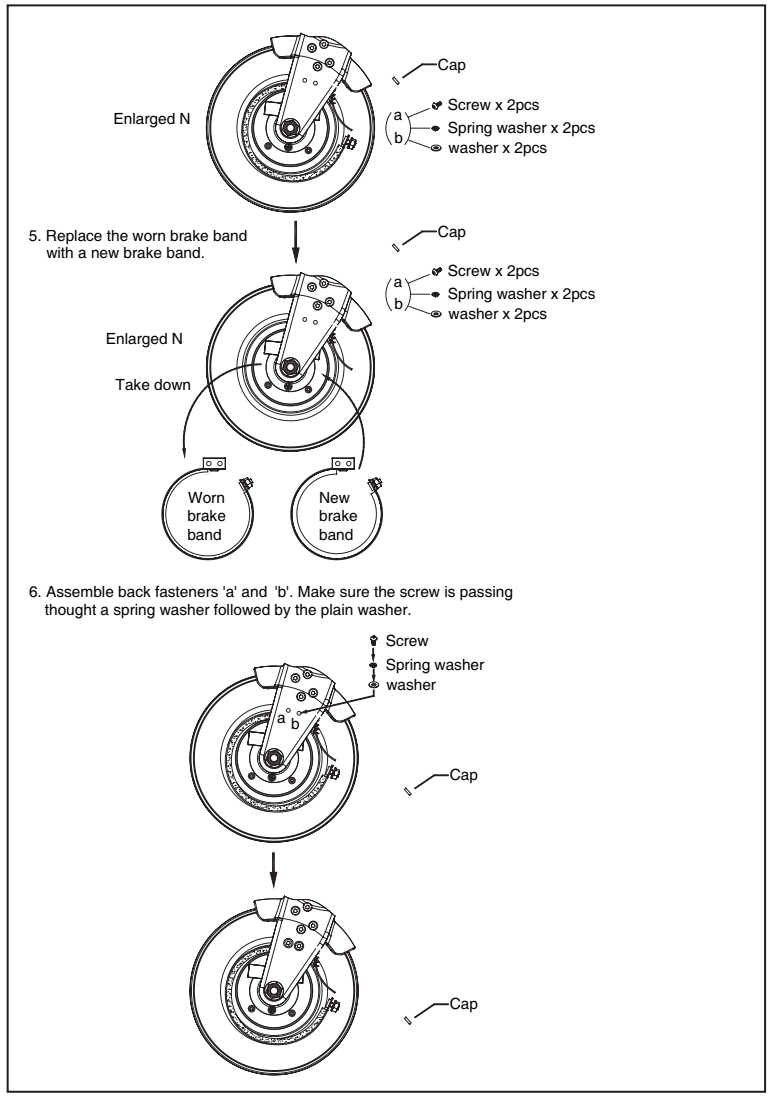


Note: Using tubes not designed for the A-bike Plus wheel hubs could result in the valve jamming when riding. This could lead to serious injury. Only use tubes designed for the A-bike Plus and ensure these fitting instructions are followed.

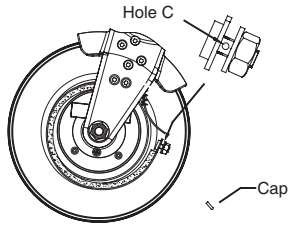
Replacing the brake band

As the brake bands are used they slowly wear, it is important that they are replaced to maintain brake performance and safety.

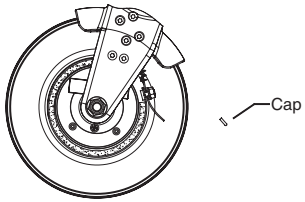

1. Detach the cap from the cable end by using pliers. (Note: The cap can be reused)
Pliers
Cap
PULL
Enlarged N
2. Unscrew the nut until the cable can slide freely.
Use M5 wrench to unscrew the nut.
Cap
Enlarged N
3. Slide the brake band out until the brake cable is completely withdrawn.
Cap
N
4. Unscrew fasteners 'a' and 'b' by using 2.5 mm Allen key.
b
a
2.5 mm Allen key
Unscrew
Cap
Enlarged N

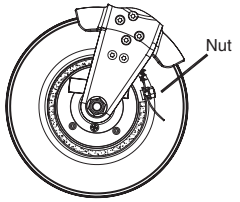


Replacing the brake band (2)



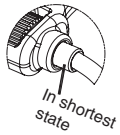
7. Lead brake cable end passing through hole 'C'.



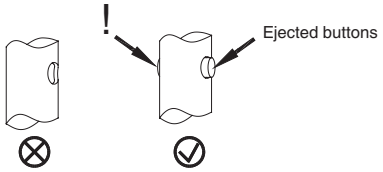


8. Check below 'd' and 'e' before tightening the nut.

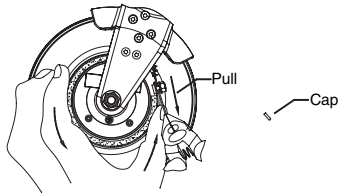
d: brake barrel is always in shortest state.



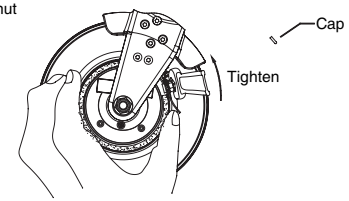
e: BOTH quick release buttons are ejected.



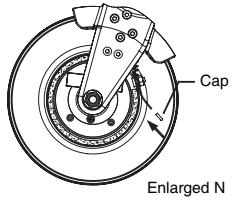
9. Wrap the brake band closely around the brake barrel, using pliers to pull the cable end out.



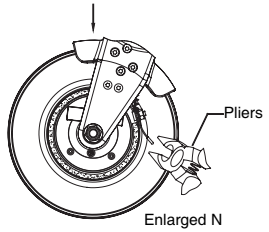
10. Tighten the nut



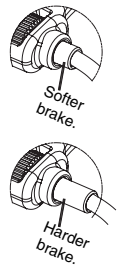
11. Plug in cable cap to protect the cable end.



12. Use pliers to clamp the cable cap tight.



13. Adjust brake barrel to adjust braking force.



REMARK: To replace rear brake band, same as step 1 to 12.

REPAIRS

Warranty

Frame
1 Year warranty on the frame against defects in manufacturing.

Components
1 year warranty against defects in workmanship.

Owner warranty
Your local A-bike Plus distributor warrants all original components for a period of one year from the date of purchase. This warranty is expressly limited to the repair or replacement of a defective frame or defective components.

This warranty applies only to the original owner and is not transferable. Claims under this warranty must be made directly to your local A-bike Plus distributor, proof of purchase is required. This warranty does not cover normal wear and tear, follow-up maintenance by non-certified persons, or installation of parts or accessories not originally intended for the A-bike Plus as sold.

The warranty does not apply to damage or failure due to accident, misuse, abuse, or neglect. Modification of the frame or components voids this warranty. Your local distributor is not responsible for incidental or consequential damages or labour charges associated with replacing parts not covered by the warranty. This warranty gives the consumer specific legal rights, and those rights may vary from place to place.

This warranty does not affect the statutory rights of the consumer.

Please record your serial number here with date of purchase: